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Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of claims:

What is clamed is:

1. (currently amended) A method of fabricating an optical component comprising the steps of: providing a detector array having more detectors than a number of known channels; providing an input port and a dispersive element within a waveguide structure, the dispersive element disposed for receiving light provided at the input port and for dispersing the light onto a plane disposed adjacent the detector array, the light dispersed other than as channelised data within the known channels and the detector array having detectors along a length substantially exceeding the length of the light within the known channels dispersed along the plane; and, determining an operator for transforming spectral data sensed by the detector array into values indicative of intensity of light within each of the predetermined wavelength ranges corresponding to the known channels, the operator is dependent upon array location adjacent the plane to correct for tolerances in array placement, and upon optical variations in the waveguide and included structures for compensating therefore, with the operator accommodates variable data provided in response to external sensor data.

2. cancelled

3. cancelled

4. cancelled

5. cancelled

6. cancelled

7. (currently amended) A method of fabricating an optical component according to claim ~~6~~ 1 comprising a temperature sensor for providing the external sensor data.

8. (currently amended) A method of fabricating an optical component according to claim ~~5~~ 1 wherein the operator is dependent upon input port location.

9. (currently amended) A method of fabricating an optical component according to claim [~~4~~] 1 wherein the operator accommodates variable data provided in response to external sensor data.

10. (original) A method of fabricating an optical component according to claim 9 comprising a temperature sensor for providing the external sensor data.

11. cancelled

12. (currently amended) A method of fabricating an optical component according to claim ~~3~~ 1 wherein the detector array is positioned adjacent the plane for receiving most of the dispersed light dispersed while the component operates within any temperature within a predetermined temperature range.

13. (original) A method of fabricating an optical component according to claim 12 wherein a detector at each of two opposing ends of the array of detectors is positioned to receive no light in use at a temperature central to the temperature range.

14. (original) A method of fabricating an optical component according to claim 1 wherein the detector array comprises at least a number of detectors equal to three times the number of known channels.

15. (original) A method of fabricating an optical component according to claim 14 wherein the detector array comprises at least a number of detectors equal to three times the number of known channels plus two further detectors.

16. (original) A method of fabricating an optical component according to claim 1 wherein the dispersive element comprises an array waveguide grating.

17. (original) A method of fabricating an optical component according to claim 16 wherein the detector array is adjacent an unguided portion of the array waveguide grating and

wherein the component is absent a plurality of waveguides exiting the array waveguide grating.

18. (original) A method of fabricating an optical component according to claim 17 wherein the input port is adjacent an unguided portion of the array waveguide grating and wherein the component is absent an integrated waveguide for guiding light into the array waveguide grating.

19. (original) A method of fabricating an optical component according to claim 16 wherein the input port is adjacent an unguided portion of the array waveguide grating and wherein the component is absent an integrated waveguide for guiding light into the array waveguide grating.

20. (original) A method of fabricating an optical component according to claim 1 wherein the operator is determined by a digital signal processor associated with the optical component.

21. (original) A method of fabricating an optical component according to claim 20 wherein the optical component comprises the digital signal processor.

22. (original) A method of fabricating an optical component according to claim 20 wherein the operator is determined independently for each optical component.

23. (original) A method of fabricating an optical component according to claim 22 wherein the optical component is an optical wavelength monitor.

24. (original) A method of fabricating an optical component according to claim 1 wherein the optical component is an optical wavelength monitor.

25. cancelled

26. cancelled

27. cancelled

28. cancelled

29. cancelled

30. cancelled

31. cancelled

32. cancelled

33. cancelled

34. (currently amended) A method of fabricating an optical component according to claim ~~25~~ 1 wherein the detector array is positioned for receiving most of the dispersed light dispersed while the component operates within any temperature within a predetermined temperature range and a detector at each of two opposing ends of the array of detectors is positioned to receive no light in use at a temperature central to the temperature range.

35. cancelled

36. cancelled

37. cancelled

38. cancelled

39. cancelled

40. cancelled

41. (currently amended) An optical component comprising: an input port; a detector array for sensing data and having more detectors than a number of known channels; a waveguide structure including a dispersive element within the waveguide structure, the dispersive element disposed for receiving light provided at the input port and for dispersing the light onto the detector array, the light dispersed other than as channelised data within the known channels; and a processor for determining a operator for

transforming data sensed by the detector array into values indicative of intensity of light within each of the predetermined wavelength ranges corresponding to the known channels, wherein the operator accommodates imprecise placement of the detector array and a temperature sensor for providing external sensor data and wherein the operator accommodates the external sensor data.

42. cancelled

43. (currently amended) An optical component according to claim 41 ~~42~~ wherein the detector array is positioned adjacent the dispersive element for receiving most of the dispersed light dispersed while the component operates within any temperature within a predetermined temperature range.

44. (original) An optical component according to claim 43 wherein a detector at each of two opposing ends of the array of detectors is positioned to receive no light in use at a temperature central to the temperature range.

45. (original) An optical component according to claim 41 wherein the input port location is determined during manufacture based on a location wherein light is coupled into an unguided region of the dispersive element.

46. (original) An optical component according to claim 45 wherein the dispersive element is an array waveguide grating.

47. (original) An optical component according to claim 41 wherein the detector array comprises at least a number of detectors equal to three times the number of known channels.

48. (original) An optical component according to claim 47 wherein the detector array comprises at least a number of detectors equal to three times the number of known channels plus two further detectors.

49. (original) An optical component according to claim 41 wherein the dispersive element comprises an array waveguide grating.

50. (original) An optical component according to claim 49 wherein the detector array is disposed adjacent an unguided portion of the array waveguide grating and wherein the optical component is absent a plurality of integrated waveguides exiting the array waveguide grating.

51. (original) An optical component according to claim 50 wherein the input port is adjacent an unguided portion of the array waveguide grating and wherein the component is absent an integrated waveguide for guiding light into the array waveguide grating.

52. (original) An optical component according to claim 49 wherein the input port is adjacent an unguided portion of the array waveguide grating and wherein the component is absent an integrated waveguide for guiding light into the array waveguide grating.

53. (original) An optical component according to claim 41 wherein the processor comprises a digital signal processor associated with the optical component.

54. (original) An optical component according to claim 41 wherein the optical component includes an optical wavelength monitor.

55. (original) A method of fabricating an optical component according to claim 41 wherein the detector array has detectors along a length substantially exceeding the length of the dispersed light within the known channels.

56. cancelled